CLAIMS

We claim:

1. An apparatus, comprising:

a first node;

a second node, the first node being configured to transmit packets of data to the second node;

a first processor associated with the first node; and

a second processor associated with the second node, the second processor being configured to calculate a severity level and being configured to transmit data associated with the severity level to the first node, whereby the first node can apply a call admission policy to regulate the transmission of packets of data from the first node to the second node.

2. The apparatus of claim 1, wherein the severity level is associated with a packet delay and a packet loss ratio between the first node and the second node.

3. The apparatus of claim 1, wherein the packets are associated with a plurality of classes of data, the call admission policy being configured to block packets associated with at least one class of the plurality of classes of data when the severity level is greater than or equal to a predetermined threshold severity level.

4. The apparatus of claim 3, wherein the plurality of classes includes a plurality of subclasses, each class of the plurality of subclasses being associated with messages having different bandwidth requirements, the call admission policy being configured to block packets of data associated with at least one subclass of the class of packets being blocked.

5. The apparatus of claim 1, the severity level being a first severity level, the apparatus further comprising:

a third node configured to transmit packets of data to the first node;

a third processor associated with the third node, the first node being configured to receive the packets of data from the third node, the first processor being configured to calculate a second severity level based on the packets of data received from the third node, and transmit data associated with the second severity level to the third node, whereby the third node can apply a call admission policy to regulate the transmission of packets from the third node to the first node.

6. The apparatus of claim 1, the severity level being a first severity level, the apparatus further comprising:

a third node, the third node being configured to receive packets of data transmitted from the first node to the third node; and

a third processor, the third processor being configured to calculate a second severity level and being configured to transmit data associated with the second severity level to the first node, whereby the first node can determine a call admission policy to regulate the transmission of packets from the first node to the third node, based at least on the second severity level.

7. The apparatus of claim 1, further comprising:

a memory device associated with the first node, the memory device being configured to store data associated with at least one of the severity level; a packet delay; the total number of received packets; and a packet loss.

8. The apparatus of claim 1, further comprising:

a memory device associated with the first node, the memory device being configured to store data associated with a destination list and a source list, the destination list including data associated with packets of data being transmitted from the first node to the second node and the source list including data associated with packets of data being received at the first node.

9. A method, comprising:

transmitting a packet of data from a first node to a second node;

receiving a packet of data at the second node;

determining a severity level based on the received packet of data;

transmitting data associated with the severity level to the first node;

receiving the data associated with the severity level at the first node;

determining if the severity level has changed; and

applying a call admission policy based on the severity level to regulate the transmission of packets from the first node to the second node.

10. The method of claim 9, wherein determining the severity level includes determining a packet loss and a packet delay between the first nodes and the second node.

11. The method of claim 9, wherein determining if the severity level has changed includes determining that the severity level has changed.

12. The method of claim 11, further comprising:

applying the call admission policy to perform one of admit packets associated with a previously blocked class of packets and block packets associated with a previously admitted class of packets.

13. The method of claim 9, the severity level being a first severity level, the method further comprising:

transmitting a packet of data from a third node to the first node;

receiving a packet of data at the first node;

determining a second severity level based on the packet of data received from the third node;

transmitting data associated with the second severity level to the third node;

receiving the data associated with the second severity level at the third node;

determining if the second severity level has changed; and

applying a call admission policy based on the second severity level to regulate the transmission of packets from the third node to the first node.

14. The method of claim 9, the severity level being a first severity level further comprising:

transmitting a packet of data from the first node to a third node;

receiving a packet of data at the third node;

determining a second severity level based on the packet of data received from the first node;

transmitting data associated with the second severity level to the first node;

receiving the data associated with the second severity level at the first node;

determining if the second severity level has changed; and

applying a call admission policy based on the second severity level to regulate the transmission of packets from the first node to the third node, based at least on the second severity level.

15. The method of claim 9, further comprising:

storing data associated with at least one of the severity level; a packet delay; the total number of received packets; and a packet loss in a memory device associated with a first node.

16. The method of claim 9, further comprising:

storing data associated with a destination list and a source list, the destination list including data associated with packets of data being transmitted from the first node to the second node and the source list including data associated with packets of data being received at the first node.

17. Processor-readable code stored on a processor-readable medium, the code comprising code to:

receive data associated with a severity level, the severity level being determined at a second node based on a packet of data transmitted from a first node to a second node;

determine if the severity level has changed; and

apply a call admission policy based on the severity level to regulate the transmission of packets of data from the first node to the second node.

18. The processor-readable code of claim 17, further comprising code to:

calculate a cost function based on a packet of data received from a remote node;

update a severity level; and

transmit the severity level to the remote node.

19. The processor-readable code of claim 17, wherein the code for applying the call admission policy includes code to admit a first class of calls when the severity level decreases and to block a second class of calls when the severity level increases.

20. The processor-readable code of claim 17, wherein the code for applying the call admission policy includes code to admit calls greater than a predetermined size associated with a predetermined class when the severity level decreases and to block calls that will consume less than or equal to a predetermined bandwidth associated with the predetermined class when the severity level increases.

21. A method of maintaining quality of service in a network where no quality of service information is received from the network, comprising:

transmitting a packet of data from a first node to a second node;

receiving a packet of data at the second node;

determining a severity level based on the received packet of data;

transmitting data associated with the severity level to the first node;

receiving the data associated with the severity level at the first node;

determining if the severity level has changed; and

applying a call admission policy based on the severity level to regulate the transmission of packets from the first node to the second node without using QoS data from the network.

22. The method of claim 21, wherein maintaining the quality of service includes maintaining the quality of service on a wide area network.

23. The method of claim 21, wherein maintaining the quality of service includes maintaining the quality of service on a secure network.

24. The method of claim 23, wherein the quality of service is maintained on a military network.

25. The method of claim 23, wherein the quality of service is maintained on a commercial network.

26. The method of claim 21, wherein applying a call admission policy includes applying a multilevel precedence and preemption policy.